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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,394	11/30/2001	Petri Helio	460-010714-US(PAR)	9029
2512	7590	10/20/2005	EXAMINER	
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			SHARMA, SUJATHA R	
			ART UNIT	PAPER NUMBER
			2684	

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/000,394

Applicant(s)

HELIO ET AL.

Examiner

Sujatha Sharma

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6,8,10-17 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,8,10-17 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,8,10,19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cahill [US 5,287,556] in view of Liu [US 6,778,594].

Regarding claims 1,8,10,19 Cahill discloses a radio receiver with a variable bandwidth received channel filter. Cahill further discloses a reference signal comprising an in-phase component and quadrature component is input to the filter (see fig. 1 where I and Q components are input to the filter 113,115, col. 3, lines 5-19). Cahill further discloses a method wherein at least one of the following steps is taken:

- changing the frequency of said at least one reference signal ( see col. 4, line 55 – col. 5, line 25 and fig. 5)
- measuring the strength of the output signal of the filter without converting the signal into another frequency before the measurement, and determining, on the basis of the measurement on the strength of the output signal of the filter/ the location of the pass band of said filter ( see col. 4, line 55 – col. 5, line 25 and fig. 5)

However, Cahill does not explicitly disclose a complex filter.

Liu, in the same filed of endeavor, teaches a radio receiver employing complex filtering using a polyphase/complex filter. See fig. 2 and col. 3, line 5 – col. 4, line 45.

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Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to use the complex filter taught by Liu in the receiver disclosed by Cahill in order to process the intermediate signal which is present as a complex signal with in-phase and quadrature components.

3. Claims 2-6 and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cahill [US 5,287,556] and Liu [US 6,778,594] in view of Ford [EP 475 705 A2].

Regarding claims 2,11 Cahill as treated in claim 1 discloses all the limitations. However he specifically does not disclose a method wherein on the basis of measurements at least one maximum point is searched for the strength of the output signal.

Ford, in the same filed of endeavor, teaches a method wherein on the basis of measurements, at least one maximum point is searched for the strength of the output signal. See col. 7, lines 2-36.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to use the above teachings of Ford in modified Cahill's invention for proper and accurate alignment/tuning of the filter.

Regarding claims 3,4,12,13 Ford further discloses a method wherein the frequency of said reference signal is changed, until at least one maximum point is found, wherein the frequency of said reference signal at said maximum point indicates the location of the pass band filter. See col. 7, line 2 - col. 8, line 49.

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Regarding claims 5,16 Ford further discloses a method wherein the tuning of the filter is performed automatically. See col. 2, lines 6-9.

Regarding claims 6,17 Ford further discloses a method wherein the tuning of the filter is performed at intervals. See col. 8, line 50 - col. 9, line 2 (where the tuning is performed whenever required and so at some intervals for example depending on the aging of filter).

Regarding claim 14, Ford further discloses a method wherein the means for changing the time constant of said at least one filter comprise an adjustable capacitor. See col. 1, lines 17-25.

Regarding claim 15, Ford further discloses a method wherein the means for changing the time constant of said at least one filter comprise at least one capacitor, and selection means for connecting said at least one capacitor in a disconnectable manner to said time constant of the filter. See Fig. 4.

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-6,8,10-17,19 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sujatha Sharma whose telephone number is 571-272-7886. The examiner can normally be reached on Mon-Fri 7.30am - 4.00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sujatha Sharma  
October 12, 2005

  
**NAY MAUNG**  
SUPERVISORY PATENT EXAMINER